

Improving Dumpsite Operations with Limited Budget



INTEGRATED SOLID WASTE MANAGEMENT

Notes 7-1999

Environmental Management



Open dumpsites pose a threat to the health situation of communities. Local governments can take doable measures such as building an embankment around the dumpsite and planting trees on top as in Dumaguete City (inset).

Inadequate Dumpsite Management

Despite greater awareness of proper waste disposal methods, many local governments still resort to open dumping-and-burning to dispose of waste because this method costs the least. Having a suitable waste disposal facility is constrained by several problems including a limited waste management budget for municipalities. The absence of immediate remedial actions in the dumpsite, difficulty of locating new disposal sites acceptable to residents, and inadequate skills and knowledge on available technology by managing personnel aggravate the situation.

This situation has forced local governments to look into alternative waste disposal methods including sanitary landfill. However, establishing appropriate disposal facility requires budget allocation and a longer planning period. There is also the added cost of doing preparatory studies and training people to operate and manage the facility.

Limited budgets notwithstanding, operations in current disposal facilities can be improved. Implementing good "dumpsite-keeping" actions will reduce problems like noise, smoke, odor, vermin, and risk of water pollution. Local governments do not need to wait for additional funds to improve the way they handle waste. Immediately doable responses, when taken as a whole, will enhance the proper, efficient, and sanitary disposal of solid waste.

The Local Governance Technical Notes series is a publication of the Governance and Local Democracy (GOLD) Project made possible through support of the United States Agency for International Development (USAID) under the terms of the GOLD Project Contract No. 492-0471-C-00-5089-00. The series provides information on key processes and tools in local government management, service delivery, citizen participation, and policy issues. The opinions expressed herein do not necessarily reflect the views of USAID.



Technology

Preparing to Improve the Dumpsite

An integrated approach to solid waste management must include improvement of dumpsite operations to be effective. These preparatory steps will improve the current site.

- Recognize that doing pre-disposal actions like waste reduction and recycling can minimize waste disposal problems.
- Conduct a cross visit activity for key leaders and dumpsite personnel to other municipalities or cities where improved disposal facilities are in operation.
- Formulate an integrated solid waste management program through a multi-sectoral strategic planning workshop.
- With the help of resource persons, require local government personnel in

charge of dumpsite operations to undergo training on alternative strategies

and techniques to improve operation and maintenance of disposal facilities.



To be successful, measures to improve dumpsite operations should be part of an integrated approach that also includes waste reduction and segregation at source.

Pointers on Improved Dumpsite Operations

While planning a long-term alternative method for disposing of waste, communities can choose any or all of the following simple guidelines to improve operations and sanitary conditions at the dumpsite:

1. Maintain access roads and drainage systems to minimize accidents, spillage, and stagnant pools of septic water.

2. Install a control gate and security fence around the facility to protect the site from entry of unwanted wastes from industries and other sources.

3. Assign a foreman and an aide for the proper and systematic operation and maintenance of the facility. This includes monitoring of people and vehicles entering the facility.

4. Dump and pile garbage at the farthest accessible section of the

dumpsite to maximize utilization of the area.

5. If available, use a bulldozer to push garbage to the working area and compress the pile with at least three passes to reduce the bulk volume. Cover the compacted pile with a layer of soil to improve sanitation and aesthetics at the facility.

6. Install a portable, light material (e.g., plastic sheet, screen, fish net) as catcher at the unloading area perpendicular to the wind direction. This prevents the scattering of light materials all over the site and onto adjoining areas.

7. Do not burn mixed solid waste. This aggravates air pollution and poses health hazards to garbage pickers and facility workers.

8. Organize garbage pickers into a cooperative for the orderly and efficient recovery of recyclable materials.

9. Plant trees on at least a five-meter wide buffer strip around the facility. This will improve aesthetics and function as a windbreak for the dumpsite.



An example of an immediate measure is to fence the dump.



Policy and Practice

Enabling Framework

RA 7160, the Local Government Code, mandates local governments to deliver efficient solid waste management services to their constituents including the proper use of disposal facilities.

DENR Administrative Orders 98-49 and 98-50 provide for guidance and a timeframe for the gradual phase-out

of dumpsites, upgrading of disposal facilities to controlled dumps, and eventually, the establishment of sanitary landfills. They define the site selection criteria for sanitary landfill facilities.

Presidential Decrees 552, 825, 856, and 984 provide rules and penalties covering sanitation and disposal.

Municipal Ordinances for Comprehensive Integrated Solid Waste Management should provide for improved operation and maintenance of dumpsites. A good example is General Santos City's Ordinance No. 08, Series of 1997 that requires sanitary disposal of solid waste.

Practices That Are Working

Like any rapidly urbanizing locality, General Santos City (estimated population: 377,034) experiences the effects of a growing population, uncontrolled sprawl, and congestion. Disposing of solid waste has become a concern that requires an urgent solution.

Among the many responses of the City Council is the Integrated Solid Waste Management Program. Ordinance No. 08, Series of 1997, which mandated the segregation of waste, imposed heavier penalties for violations, and required the proper and sanitary disposal of solid waste at the current city disposal facility located at a leased pasture area. The City Government also decided to construct a sanitary landfill to replace the present dumpsite through the Philippine Regional/Municipal Project of the Department of Interior and Local Government (DILG).

To make the solid waste management program more efficient, the City improved "dumpsite-keeping" methods in its existing disposal facility. Based on an assessment of the overall solid waste management system of the city, physical evaluation of the dumpsite, and discussions with resource persons and dumpsite personnel, doable options to improve operation and maintenance of the dumpsite were identified and implemented.

Dumping of waste is done at the farthest end of the facility resulting to the more efficient use of the area. Because waste is not burned, combustion has been minimized. For

collection trucks, access to the facility is easier because of maintained roads, and regulated by an access gate and security fence around the facility.



General Santos City uses bulldozers to compact garbage pile and maximize space. Personnel are deployed to monitor and check on dump trucks entering the dumpsite.



LGU Action Agenda

Other Initiatives

The **City of Dumaguete** transformed its dumpsite into a controlled dumping facility with a park and nursery. Fresh garbage is properly piled and compacted by a bulldozer at the working area. Covering material is taken from the degraded garbage (humus). Humus is also recovered from the dump by a cooperative and this is sold as an ingredient for a privately operated organic fertilizer plant. Recyclables are also recovered by another cooperative operating at the facility. You may get more information from City Planning and Development Office at (035) 225-0386. You may also contact the provincial Environment and Natural Resources Management Division at (035) 225-1601.

In **Brooke's Point, Palawan**, the Municipal Environment and Natural Resources Committee (MENRC) and the Clean and Green Committee conducted a feasibility study and barangay-based seminars and workshops for a sanitary landfill. At the present dumpsite, trees serve as a natural fence, buffer along the road, and have improved the aesthetics of the facility. More information is available at the Environmentally Sustainable Development Office at telephone (048) 423-1141 to 43.

What You Can Do

Preparing to make immediate improvements on your dumpsite? These steps are easily doable:

- Assess dumpsite operations. Make a list of present personnel, facilities, and equipment.
- Visit some sites known for their improved disposal facilities.
- Identify opportunities for improvement, such as separate areas for segregated wastes, using "catch" material for easily wind-blown material, or record-keeping and management.
- Identify and acquire resources needed to improve operations and maintenance of the facility.



Brooke's Point planted trees along the access road around the dumpsite.

Cagayan de Oro City has an operation almost similar to a landfill. A day's pile of waste is compacted and covered with soil. While the disposal

has no clay lining or provision for leachate treatment, it still qualifies as a controlled dump under DAO 98-49.

Resources and References

The **Solid Waste Management Council** of General Santos City will give you more ideas about good maintenance measures for dumpsites. You may call the Office of the Mayor, Environment and Natural Resources Office at (083) 553-5042.

As for other stages of the integrated solid waste management program, you can call the **Presidential Task Force on Waste Manage-**

ment at (02) 426-2524 or 928-3771 on "how-to's" about dumpsite management.

The Project Management Office of the **Solid Waste Environmental Enhancement Project (SWEEP)** in DENR in Quezon City provide technical information on site selection and improved dumpsite operations. The DENR regional and provincial offices provide the same services.

Reading more books on solid waste

management will give you more helpful ideas. The *Solid Waste Management for Local Governments* published by the DENR-Environmental Management Bureau, discusses sanitary landfills in detail. The *Integrated Solid Waste Management Sourcebook* from the GOLD Environment Program is a compendium of interventions that have been tried and tested in different communities. You may get a copy from ARD, Inc.